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EARLY INTERVENTION TO PREVENT PTSD AND OTHER TRAUMA-RELATED PROBLEMS

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Although the study of early intervention has accelerated greatly in the last decade, and this acceleration has increased following September 11, 2001, the early intervention evidence base remains very limited. Early intervention is defined here as intervention designed to prevent chronic emotional problems and minimize long-term deterioration in quality of life following trauma exposure. A conference, sponsored by a number of federal agencies (including the Department of Defense, Department of Veterans Affairs, Department of Justice, National Center for PTSD, National Institute of Mental Health, and American Red Cross), recently assembled experts from around the world to arrive at a consensus about early interventions following incidents of mass violence. Conference attendees concluded that the evidence available from methodologically-strong randomized controlled trials (RCTs) does not permit definitive confirmation or refutation of the effectiveness of any early psychological intervention following major incidents (see www.ncptsd.org/facts/disasters/fs_consensus.html). The majority of RCTs in this field have investigated treatments following the aftermath of individual traumas, rather than collective traumas, but strong conclusions about individual preventive treatments are also unwarranted at present. Moreover, there are no RCTs that specifically address early intervention with traumatized children.

Psychological debriefing. Psychological debriefing can be provided in many ways, but is here defined as a single-session intervention delivered to groups or individuals with the aims of promoting disclosure of traumatic experiences, normalizing reactions to trauma, educating participants about stress reactions, enhancing coping, and identifying those who may benefit from more intensive services. Although psychological debriefing was originally intended for active-duty military and emergency services personnel, it has been applied to civilians in many settings. Results of RCTs conducted to date indicate that psychological debriefing delivered to *individuals or couples* does not prevent PTSD or other psychopathology (Rose et al., 1999), and may worsen psychological outcomes in some participants (Mayou et al., 2000). Overall, less rigorous evaluations have produced mixed findings, but most of the better studies have failed to indicate clear benefits of group psychological debriefing (Deahl et al., 2000). Some research also suggests that extending psychological debriefing by increasing the number of post-trauma contacts to three does not improve psychological outcomes (Carlier et al., 2000).

Currently, there is no evidence from RCTs to support the preventive efficacy of Critical Incident Stress Debriefing (CISD), a structured method of group review of a critical incident developed for emergency services personnel. CISD may assist with group cohesion, morale, and other important outcomes, but this has not been demonstrated empirically. At present, it remains unclear whether CISD is more effective than traditional methods of discussion, social support, or other psychological responses to occupational stress. Mitchell and Everly (2000), the developers of CISD, emphasize that CISD was not intended to be used separately from the other components of a larger program of critical incident stress management (CISM), which is a "comprehensive, integrative, multi-component crisis intervention system." They acknowledge that there is a need for greater methodological rigor in CISD studies, and for systematic evaluation of CISM systems.

Recent reviewers have raised questions about the efficacy of psychological debriefing as currently practiced (Litz et al., in press; Raphael & Wilson, 2000; Rose et al., 2001). In general, the reviewers conclude that there is sufficient empirical evidence to recommend that psychological debriefing not be routinely provided to individuals immediately after trauma, but that careful RCTs of CISD and other forms of psychological debriefing for both individuals and groups are needed. The International Society for Traumatic Stress Studies' Practice Guidelines on psychological debriefing (Bisson et al., 2000) state that, if employed, debriefing should be conducted by experienced, well-trained practitioners,

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should not be mandatory, should utilize some clinical assessment of potential participants, and should be accompanied by clear and objective evaluation procedures.

One theory about why debriefing may produce negative outcomes links these outcomes with the association between heightened arousal in early-phase post-trauma and greater likelihood of long-term psychopathology (Bryant & Harvey, 2000; Shalev, 2001). Because verbalizing of the trauma in debriefing may override a natural inclination of the highly distressed to avoid reminders of the trauma, and is time-limited in a group setting, habituation to the evoked distress may not occur (as it is intended in exposure therapy). Therefore, overriding dissociation and avoidance soon after trauma via debriefing may be detrimental to some individuals, particularly those with heightened arousal.

Cognitive-behavioral interventions. Cognitive-behavioral early interventions have generally been provided in an individual format for trauma survivors who are experiencing significant distress. They have incorporated a variety of intervention methods (i.e., anxiety management training, cognitive restructuring, exposure therapy, and use of therapeutic "homework"). To date, early provision of cognitive-behavioral interventions has been delivered to individual survivors over the course of about 4 - 5 sessions, and generally at least 2 weeks after a trauma.

Recent research has yielded promising results in terms of the potential of cognitive-behavioral interventions to prevent psychopathology. Female victims of assault who received a four-session intervention reported significantly fewer reexperiencing and depressive symptoms five months post-assault, compared with a matched untreated control group (Foa et al., 1995). A similar intervention was associated with improvements in global severity of PTSD and other outcomes in sexually assaulted women (Echeburua et al., 1996).

Bryant and colleagues (1998) compared a cognitive-behavioral intervention to supportive counseling with survivors of either motor vehicle accidents or industrial accidents diagnosed with acute stress disorder. More cognitive-behavioral intervention than supportive counseling participants improved in terms of intrusions, avoidance, and depression, at both post-treatment and follow-up assessments. The study was replicated and extended in a comparison of prolonged exposure, exposure plus anxiety management, and supportive counseling (Bryant et al., 1999). Six months after the trauma, 67% of the supportive counseling condition, 23% of the prolonged exposure plus anxiety management condition, and 15% of the prolonged exposure condition met criteria for PTSD.

Bryant and Harvey (2000) are very clear that some elements of cognitive-behavioral interventions (i.e., prolonged exposure) are not appropriate for everyone. In cases where exposure methods may be contraindicated (i.e., those experiencing extreme anxiety, suicide risk, marked ongoing stressors, or acute bereavement), other techniques, including anxiety management, supportive therapy, or pharmacological intervention may be used.

Eye movement desensitization and reprocessing (EMDR) is a form of intervention that uses treatment components similar to those employed in cognitive behavioral interventions, combined with alteration of attention back and forth across the midline via eye movements, taps, or sounds. Solomon (1998) offers case examples and guidelines for using EMDR in acutely traumatized individuals. However, we were unable to find published clinical trials of EMDR as an early intervention.

There has been no controlled outcome research on early intervention with children. Recent practice parameters for the psychological treatment of traumatized children with chronic PTSD(Cohen et al., 1998) concluded that: (a) early intervention with children is important, (b) no single treatment approach will likely be applicable for all traumatized children, (c) cognitive-behavioral therapy has been demonstrated in several recent empirically sound studies to be effective in treating traumatized children, and (d) interventions for children generally include some components of art or play therapy, cognitive-behavioral techniques, school and / or family intervention, and sensory / motor / learning interventions if necessary.

Finally, although traumatic events are sometimes associated with loss of life, the degree to which early traumatic grief-related interventions can play a role in preventing or reducing grief-related problems remains relatively unexamined at this time. In a review of treatment for traumatic grief (Jacobs & Prigerson, 2000), the authors concluded that both cognitive-behavioral and psychodynamic treatments hold promise. They also suggested that a therapy specifically designed to address traumatic grief will be most useful. "Traumatic Grief Treatment," which is based on cognitive-behavioral components, is currently undergoing an RCT. In a pilot study, the treatment had a large beneficial effect on grief, anxiety, and depression symptoms (Shear et. al., 2001).

"Frontline" treatment. Management of combat stress reactions in active-duty personnel has evolved to use frontline treatment as a way of increasing rate of return to military units and reducing psychological distress (Neria & Solomon, 1999). The three principles of frontline treatment are proximity (administer the intervention close to the traumatic event), immediacy (give treatment as soon as possible following onset of symptoms), and expectancy (quick return to the unit is expected). Methodologies used in studies of frontline treatment are relatively weak. The best study to date is that of Solomon and Benbenishty (1986), who studied Israeli soldiers with known combat stress reactions during the 1982 Lebanon War. Using a quasi-experimental design, the investigators found that return to unit was strongly related to all three frontline treatment principles, with expectancy most closely associated with PTSD. Conclusions of this study are, however, limited by the study methodology, and, generally, the utility of FT in reducing the negative consequences of both combat and civilian trauma exposure requires more careful empirical investigation than has been achieved to date.

Pharmacotherapy. Although medications are routinely used to manage pain and anxiety following trauma, there are few investigations of pharmacotherapy as an early intervention. In the immediate post-traumatic period, it is difficult to distinguish between acutely symptomatic individuals who will recover from those who will go on to develop psychiatric sequelae. As a result there is great reluctance to utilize any medications at this time. However, there are both theoretical and experiential reasons (Shalev & Ursano, in press) to expect that judicious use of certain medications can make a difference in the management of acute traumatic stress reactions. Initial research into this area includes a study showing no utility of benzodiazepines (initiated within 2 and 18 days) in affecting the course of PTSD and anxiety symptoms (Gelpin et al., 1996) and a study by Pitman et al. (in press) investigating the utility of a beta-adrenergic blocker in preventing PTSD. The latter study posited that propranolol theoretically might be expected to disrupt the development of fear conditioning and consolidation of intrusive traumatic memories by blockade of beta-adrenergic receptors within six hours of a traumatic event. Although propranolol did not protect against the development of PTSD at 3-month follow-up, receipt of propranolol was associated with reduced physiological reactivity upon exposure to internal trauma cues (mental imagery). A challenge for the immediate future is to empirically establish whether medications should be administered in early phases post-trauma, and if so, which medications, under what circumstances.

Other intervention components. Early intervention routinely includes the encouragement of basic care components such as rest, recreation, return to normal routines and roles, mutual social support, and education of survivors and families. In the mass violence and early intervention consensus conference mentioned above, these and other components were strongly endorsed. Currently, there is little controlled research on which to judge the effectiveness of these components. For example, little has been done to investigate the design and impact of early trauma-related education. An exception is Resnick and colleagues' (1999) report that a 17-minute educational videotape shown to sexually-assaulted women to prepare them for forensic rape examinations resulted in significantly lower post-exam distress ratings and anxiety symptoms.

Improving early intervention research and practice. Generally, the methodological rigor or degree of replication across settings of the studies cited here is relatively weak, so that few conclusions can be drawn about the various interventions. Litz and colleagues (in press) have outlined methodological requirements of future research. Recommendations for continued research are outlined below.

First, although early interventions will often be developed in the crucible of critical incidents, the theoretical underpinnings of services should be better developed and evaluated. Ørner and Schnyder's upcoming book (in press) attempts to address application of early intervention from both an empirical and theoretical stance, as demonstrated by the chapter provided by Shalev and Ursano (in press). Second, it is important to develop and research practical methods of identifying those at high risk for developing chronic post-trauma problems (Brewin et al., in press). Third, little is known about the differential application of early interventions with various trauma survivor audiences, so that comparisons of early intervention methods across survivor groups would be helpful. More attention should be given to evaluation of existing early intervention services, such as community-based rape crisis counseling, victim assistance counseling, and disaster mental health services. Fourth, little empirical research has examined the responsiveness of those exposed to traumas to offers of preventive care. Following a disaster, for example, many of those in closest proximity do not believe that they need help, and will not seek out services, despite reporting significant emotional distress. Reasons noted have been the feeling that one is "better off" than those more affected, and that distress indicates weakness of some sort, as well as a preference for seeking informal support from family and friends (Sprang, 2000). After critical incidents, 71.4% of a sample of emergency responders reported welcoming contact with colleagues, whereas only 9.2% welcomed contact with outside professionals (Ørner, in press). As evidence-based early interventions are developed, it will be important to study marketing of services and the factors that affect their utilization, and to include peer- and family-delivered interventions.

Finally, more effort is needed to develop methodologies for early intervention research, and to study the ethics of research on early intervention. Research should address the real-world complexity of trauma survivors, and not systematically exclude survivors with co-morbid substance abuse and other problems. Outcomes measured should include substance abuse, depression, health, work and other role functioning, quality of life, consumer satisfaction, and cost. It is ethically difficult in many settings to use no-treatment, waiting-list, or assessment-only control groups, and research should address the concerns of providers that research assessment soon after traumatization may exacerbate symptoms or be unacceptable to survivors (Ruzek & Zatzick, 2000).

SELECTED BOOKS

BRYANT, R.A. & HARVEY, A.G. (2000). *Acute stress disorder: A handbook of theory, assessment, and treatment.* Washington, DC: American Psychological Association.

ØRNER, R. & SCHNYDER, U. (in press) *Reconstructing early intervention after trauma.* Oxford: Oxford University Press.

RAPHAEL, B. & WILSON, J. P. (2000). *Psychological debriefing: Theory, practice and evidence.* Cambridge: Cambridge University Press.

SELECTED ABSTRACTS

BISSON, J. I., MCFARLANE, A. C., & ROSE, S. (2000). **Psychological debriefing.** In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (pp. 317-319). New York: Guilford Press. Psychological debriefing (PD) has been widely advocated for routine use following major traumatic events. Given the current state of knowledge, neither one-time group, nor individual PD can be advocated as being able to prevent the subsequent development of PTSD following a traumatic event (AHCPR Level B). However, there may be benefits to aspects of PD, particularly when it is employed as part of a comprehensive management program (AHCPR Level C). There appears to be good evidence that it is a well-received intervention for most people (AHCPR Level A), and even though it may not prevent later psychological sequelae, it may still be useful for screening, education, and support. If PD or any similar intervention is to be employed, it is essential that it be provided by experienced, well-trained practitioners, that it not be mandatory, and that potential participants be properly clinically assessed. [Adapted from text]

BRYANT, R. A., SACKVILLE, T., DANG, S. T., MOULDS, M., & GUTHRIE, R. (1999). **Treating acute stress disorder: An evaluation of cognitive behavior therapy and supportive counseling techniques.** *American Journal of Psychiatry, 156,* 1780-1786. *Objective:* Acute stress disorder permits an early identification of trauma survivors who are at risk of developing chronic PTSD. This study aimed to prevent PTSD by an early provision of cognitive behavior therapy. Specifically, this study indexed the relative efficacy of prolonged exposure and anxiety management in the treatment of acute stress disorder. *Method:* 45 civilian trauma survivors with acute stress disorder were given five sessions of (1) prolonged exposure (N = 14), (2) a combination of prolonged exposure and anxiety management (N = 15), or (3) supportive counseling (N = 16) within 2 weeks of their trauma. 41 trauma survivors were assessed at the 6-month follow-up. *Results:* Fewer patients with prolonged exposure (14%, N = 2 of 14) and prolonged exposure plus anxiety management (20%, N = 3 of 15) than supportive counseling (56%, N = 9 of 16) met the criteria for PTSD after treatment. There were also fewer cases of PTSD in the prolonged exposure group (15%, N = 2 of 13) and the prolonged exposure plus anxiety management group (23%, N = 3 of 13) than in the supportive counseling group (67%, N = 10 of 15) 6 months after the trauma. Chronic PTSD in the supportive counseling condition was characterized by greater avoidance behaviors than in the prolonged exposure condition or the prolonged exposure plus anxiety management condition. *Conclusions:* These findings suggest that PTSD can be effectively prevented with an early provision of cognitive behavior therapy and that prolonged exposure may be the most critical component in the treatment of acute stress disorder.

CARLIER, I. V. E., VOERMAN, A. E., & GERSONS, B. P. R. (2000). **The influence of occupational debriefing of post-traumatic stress symptomatology in traumatized police officers.** *British Journal of Medical Psychology, 73,* 87-98. Certain individuals, such as police officers, are exposed to traumatic events as part of their occupational roles. In an effort to prevent psychological illnesses, notably PTSD, from arising out of work-related traumatic incidents, psychological interventions have been developed such as Critical Incident Stress Debriefing. The present study tests the hypothesis that debriefing reduces the psychological morbidity caused by work-related incidents. Because debriefing techniques were not designed for application on a 'one-off' basis, the procedure studied here consisted of three successive debriefing sessions (at 24 hours, 1 month and 3 months post-trauma), which included traumatic stress education. In a sample of 243 traumatized police officers, a subgroup of debriefed officers (N = 86) was compared with non-debriefed internal (N = 82) and external (N = 75) control groups. No differences in psychological morbidity were found between the groups at pre-test, at 24 hours or at 6 months post-trauma. One week post-trauma, debriefed subjects exhibited significantly more PTSD symptomatology than non-debriefed subjects. High levels of satisfaction with debriefing were not reflected in positive outcomes. The findings are translated into recommendations for the future use of debriefing in police practice.

COHEN, J. A., American Academy of Child and Adolescent Psychiatry Work Group on Quality Issues. (1998). **Summary of the practice parameters for the assessment and treatment of children and adolescents with posttraumatic stress disorder.** *Journal of the American Academy of Child and Adolescent Psychiatry, 37,* 997-1001. This summary provides an overview of the assessment and treatment recommendations contained in the Practice Parameters for the Assessment and Treatment of Children and Adolescents With PTSD. Major recommendations include the use of clinical interviewing with specific questioning about posttraumatic stress symptoms to diagnose this disorder; recognition of developmental considerations that may impact on how PTSD symptoms manifest in children; and the use of trauma-focused treatment interventions. Limitations and controversies regarding the present state of knowledge in the area of childhood PTSD are also discussed.

DEAHL, M., SRINIVASAN, M., JONES, N., THOMAS, J., NEBLETT, C., & JOLLY, A. (2000). **Preventing psychological trauma in soldiers: The role of operational stress training and psychological debriefing.** *British Journal of Medical Psychology, 73,* 77-85. Armed conflict is associated with significant long-term psychiatric morbidity. Interventions to reduce the incidence of psychiatric disorder following psychological trauma may be classified into three categories. Primary prevention includes the selection, preparation and training of individuals likely to be exposed to potentially traumatizing events. Secondary prevention comprises a variety of brief psychological techniques immediately or shortly after traumatizing life events, the best known of which is Psychological Debriefing. Tertiary interventions comprise the treatment of established PTSD and others. Psychiatric morbidity was studied in 106 British soldiers returning from UN peace-keeping duties in the former Republic of Yugoslavia. All 106 soldiers received an Operational Stress Training Package prior to their deployment and a randomly selected group also received a post-operational PD. Very low rates of PTSD and other psychopathology were found overall and the Operational Stress Training Package may have contributed to this. Elevated CAGE scores suggestive of significant alcohol misuse were observed in both groups and chemical avoidance behaviours arising from this may have masked psychopathology. CAGE scores diminished significantly in the debriefed group by the end of the follow-up period suggesting that PD may have been of benefit despite the apparent absence of PTSD. This study also demonstrates that a high incidence of psychiatric morbidity is not an inevitable consequence of military conflict.

ECHEBURUA, E., DE CORRAL, P., SARASUA, B., & ZUBIZARRETA, I. (1996). **Treatment of acute posttraumatic stress disorder in rape victims: An experimental study.** *Journal of Anxiety Disorders, 10,* 185-199. The aim of this study was to test the comparative effectiveness of 2 therapeutic modalities of 5 one-hr sessions [(a) cognitive restructuring and specific coping-skills training and (b) progressive relaxation training] in the treatment of acute PTSD in victims of sexual aggression. The sample consisted of 20 patients selected according to DSM-III-R criteria. A 2-group experimental design with repeated measures (pretreatment, posttreatment, and 1-, 3-, 6-, and 12-month follow-up) was used. Most treated patients improved in all measures immediately upon posttreatment and in follow-up. There were no differences between the 2 modalities in the posttreatment. However, in the 12-month follow-up the first group produced superior outcome in PTSD symptoms, but not in other measures. Implications of this study for clinical practice and future research in this field are discussed.

FOA, E. B., HEARST-IKEDA, D., & PERRY, K. J. (1995). **Evaluation of a brief cognitive-behavioral program for the prevention of chronic PTSD in recent assault victims.** *Journal of Consulting and Clinical Psychology, 63,* 948-955. The efficacy of a brief prevention program (BP) aimed at arresting the development of chronic PTSD was examined with 10 recent female victims of sexual and nonsexual assault who received 4 sessions of a cognitive-behavioral program shortly after the assault. Their PTSD and depression severity was compared with that of 10 matched recent female assault victims who received repeated assessments of their trauma-related psychopathology (assessment control; AC). The BP program consisted of education about common reactions to assault and cognitive-behavioral procedures. Two months postassault, victims who received the BP program had significantly less severe PTSD symptoms than victims in the control condition; 10 percent of the former group met criteria for PTSD versus 70 percent of the latter group. Five and a half months postassault, victims in the BP group were significantly less depressed than victims in the AC group and had significantly less severe reexperiencing symptoms.

GELPIN, E., BONNE, O., PERI, T., BRANDES, D., & SHALEV, A. Y. (1996). **Treatment of recent trauma survivors with benzodiazepines: A prospective study.** *Journal of Clinical Psychiatry, 57,* 390-394. *Background*: Most types of psychotropic drugs have been tried in the treatment of chronic PTSD, but have yielded limited results. Theory and retrospective research predict that early treatment may be more efficacious. Specifically, high-potency benzodiazepines have been recommended for the treatment of acute responses to trauma and for prevention of PTSD. This study prospectively evaluates the effect of early administration of benzodiazepines on the course of PTSD and PTSD symptoms. *Method:* 13 trauma survivors (the benzodiazepine group) were treated within 6.7 + 5.8 days after the trauma (range, 2-18) with either clonazepam (N = 10, 2.7 + 0.8 mg / day) or alprazolam (N = 3, 2.5 mg / day). 13 other trauma survivors, pair-matched with subjects in the active treatment group for gender and symptom severity in the first week after the trauma, constitute the control group. Both groups were reevaluated 1 and 6 months after the trauma for PTSD symptoms (Horowitz Impact of Event Scale; Mississippi Rating Scale for Combat-Related PTSD-civilian trauma version), PTSD status (Clinician Administered PTSD Scale), state anxiety, depression, and resting heart rate. *Results*: Subjects in the benzodiazepine group did not differ from controls in 1-month and 6-month PTSD and anxiety scores. Repeated measures ANOVA showed no group or group-by-time effect on psychometric measures. A trend toward group-by-time interaction in resting heart rate was noted (progressive decrease in the benzodiazepine group). 9 benzodiazepine subjects and 3 controls met PTSD diagnostic criteria 6 months after the trauma. *Conclusion*: Contrary to expectations, the early administration of benzodiazepines to trauma survivors with high levels of initial distress did not have a salient beneficial effect on the course of their illness, while reducing physiologic expression of arousal.

JACOBS, S. & PRIGERSON, H. (2000). **Psychotherapy of traumatic grief: A review of evidence for psychotherapeutic treatments.** *Death Studies, 24,* 479-495. The authors present the concept of Traumatic Grief and then review controlled studies that pertain to its psychotherapeutic treatment. They conclude that it will most likely be a specific therapy for Traumatic Grief that will be proven most effective in systematic studies completed in the future.

LITZ, B.T., GRAY, M. J., BRYANT, R. A. & ADLER, A. B. (in press). **Early intervention for trauma: Current status and future directions.** *Clinical Psychology: Science and Practice.* Although psychological debriefing (PD) represents the most common form of early intervention for recently traumatized people, there is little evidence supporting its continued use with individuals who experience severe trauma. This review identifies the core issues in early intervention that need to be addressed in resolving the debate over PD. It critiques the available evidence for PD and the early provision of cognitive-behavioral therapy (CBT). Based on available evidence, we propose that psychological first aid is an appropriate initial intervention but that it does not serve a therapeutic or preventive function. When feasible, initial screening is required so that preventive interventions can be used for those individuals who may have difficulty recovering on their own. Evidence-based CBT approaches are indicated for people who are at risk of developing posttraumatic psychopathology. Guidelines for managing acutely traumatized people are suggested and standards are proposed to direct future research that may advance our understanding of the role of early intervention in facilitating adaptation to trauma.

MAYOU, R.A., EHLERS, A., & HOBBS, M. (2000). **Psychological debriefing for road traffic accident victims: Three-year follow-up of a randomised controlled trial.** *British Journal of Psychiatry, 176,* 589-593. *Background:* Psychological debriefing is widely used for trauma victims but there is uncertainty about its efficacy. We have previously reported a randomised controlled trial which concluded that at 4 months it was ineffective. *Aims:* To evaluate the 3-year outcome in a randomised controlled trial of debriefing for consecutive subjects admitted to hospital following a road traffic accident. *Method:* Patients were assessed in hospital by the Impact of Event Scale (IES), Brief Symptom Inventory (BSI) and questionnaire and re-assessed at 3 months and 3 years. The intervention was psychological debriefing as recommended and described in the literature. *Results*: The intervention group had a significantly worse outcome at 3 years in terms of general psychiatric symptoms (BSI), travel anxiety when being a passenger, pain, physical problems, overall level of functioning, and financial problems. Patients who initially had high intrusion and avoidance symptoms (IES) remained symptomatic if they had received the intervention, but recovered if they did not receive the intervention. *Conclusions*: Psychological debriefing is ineffective and has adverse long-term effects. It is not an appropriate treatment for trauma victims.

PITMAN, R. K., SANDERS, K. M., ZUSMAN, R. M., HEALY, A. R., CHEEMA, F., LASKO, N. B., CAHILL, L. & ORR, S. (in press). **Pilot study of secondary prevention of post-traumatic stress disorder with propranolol.** *Biological Psychiatry*. *Background:* Preclinical considerations suggest that treatment with a beta-adrenergic blocker following an acute psychologically traumatic event may reduce subsequent post-traumatic stress disorder (PTSD) symptoms. This pilot study addressed this hypothesis. *Methods:* Patients were randomized to begin, within six hours of the event, a ten-day course of double-blind propranolol (n=18) vs. placebo (n=23) 40 mg four times daily. *Results*: The mean (*SD*) one-month Clinician-Administered PTSD Scale (CAPS) score of 11 propranolol completers was 27.6 (15.7), with one outlier 5.2 *SD*s above the others' mean, and of 20 placebo completers 35.5 (21.5), t=1.1, df=29, p=.15. Two propranolol patients' scores fell above, and nine below, the placebo groups' median, p=.03 (sign test). Zero of eight propranolol, but eight of 14 placebo, patients were physiological responders during script-driven imagery of the traumatic event when tested three months afterwards, p=.04 (all p values one-tailed). *Conclusion:* These pilot results suggest that acute, post-trauma propranolol may have a preventive effect on subsequent PTSD.

RESNICK, H., ACIERNO, R., HOLMES, M., KILPATRICK, D. G., & JAGER, N. (1999). **Prevention of post-rape psychopathology**: **Preliminary findings of a controlled acute rape treatment study.** *Journal of Anxiety Disorders, 13*, 359-370. Violent sexual assault such as rape typically results in extremely high levels of acute distress. The intensity of these acute psychological reactions may play a role in later recovery, with higher levels of immediate distress associated with poorer outcome. Unfortunately, post-rape forensic evidence collection procedures may serve to increase, rather than reduce, initial distress, potentially exacerbating future psychopathology. To address these concerns, an acute time-frame hospital-based video intervention was developed to: (a) minimize anxiety during forensic rape exams, and (b) prevent post-rape PTSD, panic, and anxiety. Preliminary data indicated that (1) psychological distress at the time of the exam was strongly related to PTSD symptomatology 6 weeks post-rape, and (2) the video intervention successfully reduced distress during forensic exams.

ROSE, S., BREWIN, C.R., ANDREWS, B., & KIRK, M. (1999). **A randomized controlled trial of individual psychological debriefing for victims of violent crime.** *Psychological Medicine, 29*, 793-799. *Background:* It has been suggested that giving people the opportunity to talk about a traumatic experience may prevent the development of later disorder. We tested the efficacy of two brief interventions, education and psychological debriefing, designed to prevent adverse psychological reactions to criminal victimization. *Methods:* Individuals who had been the victims of a violent crime within the past month were written to and invited to take part in a study of their attitudes to crime and punishment: 2161 were contacted and 243 replied, of whom 157 were eligible and were randomly assigned to either an education condition, to a psychological debriefing plus education condition, or to an assessment only condition. Education involved providing information about normal post-traumatic reactions. Debriefing involved in-depth probing about events, thoughts and feelings experienced during the crime. Subjects were recruited from police and hospital sources and interviewed in their own homes: 138 were followed up at 6 months, and 92 at 11 months. *Results:* Outcome was assessed using a DSM-III-R diagnosis of PTSD, the Post-traumatic Symptom Scale, the Impact of Event Scale and the Beck Depression Inventory. All groups improved over time but there were no between-group differences. *Conclusions:* No evidence was found to support the efficacy of brief one-session interventions for preventing post-traumatic symptoms in individual victims of violent crime.

RUZEK, J.I. & ZATZICK, D.F. (2000). **Ethical considerations in research participation among acutely injured trauma survivors: An empirical investigation.** *General Hospital Psychiatry, 22*, 27-36. Posttraumatic behavioral and emotional disturbances occur frequently among physically injured trauma survivors. Despite increasing investigative interest in the evaluation and treatment of psychological distress in acutely injured patients, few studies have assessed ethical considerations surrounding research participation. The authors empirically investigated ethical considerations in research participation among 117 physically injured, hospitalized, motor vehicle accident and assault survivors. Immediately following a 1-hour research interview, participants responded to 10 questions assessing the experience of research participation. The majority of study subjects found participating in the protocol a positive experience. Most of the hospitalized patients reported that they experienced control over initiation and discontinuation of the protocol and that they derived benefit from their research participation. A minority of participants reported that they experienced unwanted thoughts and unanticipated upset during the protocol and that they felt they could not refuse participation. However, over 95 percent of patients reported that the benefits of protocol participation outweighed the costs and that in retrospect they would again agree to participate. These results suggest that while a minority of participants may have difficulties with specific aspects of protocol enrollment, overall research participation is well tolerated by the majority of acutely injured, hospitalized, trauma survivors.

SHALEV, A.Y. (2001). **What is posttraumatic stress disorder?** *Journal of Clinical Psychiatry, 62,* Supplement 17, 4-10. Our understanding of PTSD has increased significantly over the last 2 decades. Although the cause of the condition is usually easy to determine in individual patients, the symptoms of PTSD are diverse and a mixture of psychological processes are involved. This article presents a broad overview of PTSD, including its definition according to DSM-IV and ICD-10 diagnostic criteria, and its clinical course with reference to its association with depression and other mental disorders. The article also briefly reviews the assessment of patients and considers physiologic features such as responses to startle stimuli that appear to be useful in diagnosing PTSD and in differentiating it from other anxiety disorders and depression. Finally, a brief overview of the treatment of PTSD is given, including psychological and biological treatment options.

SOLOMON, R.M. (1998). **Utilization of EMDR in crisis intervention.** *Crisis Intervention and Time-Limited Treatment, 4,* 239-246. A critical incident is a situation that results in an overwhelming sense of vulnerability and / or lack of control. Information taken in during the traumatic situation may become dysfunctionally stored in the brain, unable to process, resulting in PTSD symptoms. Clinical issues that arise in the emotional aftermath often center around one or more of the following issues: (1) responsibility for the event; (2) personal vulnerability and present safety; and (3) lack of control and efficacy. Eye Movement Desensitization and Reprocessing (EMDR) is a therapeutic method that can accelerate the processing of the blocked information resulting in a decrease of symptoms and adaptive resolution. Rather than

forcing a person through stages of recovery, EMDR reprocesses dysfunctionally stored information, enabling recovery to take place in a way that is natural for the client. Consequently, with an appropriate clinical framework, EMDR can be applied in the days and weeks following critical incidents to help people process trauma. Case examples illustrate the use of EMDR in the aftermath of a critical incident to deal with issues of responsibility, present safety, and efficacy.

ADDITIONAL CITATIONS
Annotated by the Editor

BREWIN, C. R., ROSE, S., & ANDREWS, B. (in press). **Screening to identify individuals at risk after exposure to trauma.** In R. Ørner & U. Schnyder (Eds.), *Reconstructing early intervention after trauma.* Oxford: Oxford University Press.

Reviews empirical findings on the psychometric properties of instruments for the screening of individuals to detect PTSD. Information on both children and adults is included. The authors discuss the properties of a good screening instrument and provide information about their own 6-item measure.

BRYANT, R. A., HARVEY, A. G., DANG, S. T., SACKVILLE, T., & BASTEN, C., (1998). **Treatment of acute stress disorder: A comparison of cognitive-behavioral therapy and supportive counseling.** *Journal of Consulting and Clinical Psychology, 66,* 862-866.

Randomly assigned 24 participants with ASD due to civilian trauma to 5 sessions of either cognitive behavioral or supportive therapy. Compared with supportive therapy, cognitive behavioral therapy significantly reduced the likelihood of PTSD and the severity of PTSD and depressive symptoms.

MCFARLANE, A. (2000). **Can debriefing work?: Critical appraisal of theories of interventions and outcomes, with directions for future research**. In B. Raphael & J. P. Wilson (Eds.), *Psychological debriefing: Theory, practice and evidence* (pp. 327-336). Cambridge: Cambridge University Press.

Reviews influences on the evaluation of debriefing: military psychiatry, crisis intervention, Marshall's narrative tradition, psychoeducation, grief counseling, group psychotherapy, cognitive-behavioral therapy, psychopharmacology, and catharsis.

MITCHELL, J. T. & EVERLY, G. S. (2000). **Critical Incident Stress Management and Critical Incident Stress Debriefings: Evolutions, effects and outcomes.** In B. Raphael & J. P. Wilson (Eds.), *Psychological debriefing: Theory, practice and evidence* (pp. 71-90). Cambridge: Cambridge University Press.

Describes the components of Critical Incident Stress Management and reviews the historical foundations of this approach to early intervention. The authors discuss mechanisms of action in CISM and review existing research.

NERIA, Y. & SOLOMON, Z. (1999). **Prevention of posttraumatic reactions: Debriefing and frontline treatment.** In P. A. Saigh & J. D. Bremner (Eds.), *Posttraumatic stress disorder: A comprehensive text* (pp. 309-326). Boston: Allyn and Bacon.

Reviews empirical findings on debriefing and frontline treatment. The authors describe the development of frontline treatment from World War I to the present and discuss the principles of proximity, immediacy, and expectancy.

ØRNER, R. J. (in press). **A new evidence base for making early intervention in emergency services complementary to officers' preferred adjustment and coping strategies.** In R. Ørner & U. Schnyder (Eds.), *Reconstructing early intervention after trauma.* Oxford: Oxford University Press.

Assessed critical incident distress in 118 front-line responders and 99 second-line responders. Although 74% reported their emotional reaction to at least one critical incident as being overwhelming, only 6% reported intrusive symptoms consistent with Acute Stress Disorder or PTSD.

ROSE, S., WESSELY, S., & BISSON, J. (2001). **Brief psychological interventions ("debriefing") for trauma-related symptoms and prevention of post traumatic stress disorder.** *The Cochrane Library*, Volume 2001 Issue 2.

Used the Cochrane Collaboration method of literature review to examine empirical studies of debriefing. The authors conclude that debriefing does not reduce the risk of developing PTSD or reduce symptoms of depression or anxiety. Practice and research implications are provided.

SHALEV, A. Y. & URSANO, R. J. (in press). **Mapping the multidimensional picture of acute responses to traumatic stress.** In R. Ørner & U. Schnyder (Eds.), *Reconstructing early intervention after trauma.* Oxford: Oxford University Press.

Presents a multidimensional framework for understanding acute response to trauma. The authors define 4 phases of impact, rescue, recovery, and return to life and for each of these phases, then define the principal stressor, the concrete goals of behavior, psychological tasks, salient behavior patterns, the role of all helpers, and the role of professional helpers.

SHEAR, M.K., FRANK, E., FOA, E., CHERRY, C., REYNOLDS, C.F., VANDER BILT, J. & MASTERS, S. (2001). **Traumatic grief treatment: A pilot study.** *American Journal of Psychiatry, 158,* 1506-1508.

Conducted an open trial of treatment for traumatic grief, in 21 men and women an average of 3 years post-bereavement. Intention-to-treat analyses, using data from the 13 completers and 8 dropouts, showed significant and meaningful decreases in grief, depression, and anxiety symptoms.

SOLOMON, Z. & BENBENISHTY, R. (1986). **The role of proximity, immediacy, and expectancy in frontline treatment of combat stress reaction among Israelis in the Lebanon War.** *American Journal of Psychiatry, 143,* 613-617.

Examined the effectiveness of treatment stressing proximity, immediacy, and expectancy in Israeli soldiers who experienced a combat stress reaction. Each treatment principle was associated with greater likelihood of returning to duty and a lower likelihood of PTSD.

SPRANG, G. (2000). C**oping strategies and traumatic stress symptomatology following the Oklahoma City bombing.** *Social Work and Social Sciences Review, 8,* 207-218.

Examined the relationship between coping styles and outcomes in a follow-up of 383 men and women who had participated in a prior study of the Oklahoma City bombing. Individuals classified as avoidant copers were less likely than task-oriented or emotion-oriented copers to have received treatment.

PILOTS UPDATE

This summer we added the 20,000th record to the PILOTS database. It has long been our goal to add 2000 records per year to the database, and we are pleased to report that we are consistently meeting (and often exceeding) that target. We have increased the frequency of updates to the database, with new records now being added bimonthly instead of quarterly. The increased use of online document sources, and the purchase of new pen scanners, have appreciably shortened the time it takes us to get indexing for new publications into the database.

We have also taken steps that will significantly shorten the time it takes for database users to get the publications they find by searching PILOTS. We now offer hypertext links to the full text of an increasing number of journal articles—nearly 2,000 as of November 2001. Here's how it works:

After you've submitted your search command(s) and received your search results, scroll to the bottom of your screen and choose the "medium" format from the "redisplay items" menu. If the full text of a publication is available online, you will see a hypertext link in the "Availability" field for that record. Just click on that link, and your query will be directed to the requested publication's current location on its publisher's website.

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In some cases, the requested publication will appear on your computer screen in PDF or other full-text form, either because the publisher has decided to make it available free of charge, or because it recognizes your computer's internet address as belonging to an institution that subscribes to that publication.

In other cases, the publisher's website will give you a citation and abstract, and provide an opportunity to obtain access to the full text, either by providing a user identification and password or by charging an access fee to your credit card.

Each publisher sets its own access policies and charges, and may change these from time to time. (The National Center has no control over these.) In almost every case, however, you will pay no more for the convenience of immediate desktop access to the publications you need than you would pay to order them from a commercial document delivery service. We expect that clinicians without ready access to academic or medical libraries will find this convenience especially beneficial.

Links from PILOTS database records will be made only to documents whose publishers use document object identifiers (DOIs) to establish permanent Web addresses for them. This policy ensures that links will continue to work even when publishers reorganize their websites. Our goal is to make these links as reliable as the bibliographical information that we provide.

We expect to increase the number of full-text links over the coming months, as new publishers participate in the cooperative system that makes this possible, and as journals make more back issues available online. As book publishers and other agencies begin to use DOIs, we shall add links to the full text of these publications as well.

For over a decade, the PILOTS database has helped researchers and clinicians identify those publications that contain the information they need. Now we shall be able to take our users directly to that information.

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